AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An ultrasonic flow sensor, ~~including~~ comprising
– at least one ultrasonic transducer ~~(A, B)~~ for transmitting and receiving ultrasonic signals ~~(A0, B0)~~, and
– a receiver unit (4) ~~that is~~ connected to the ultrasonic transducer ~~(A, B)~~ ~~and~~ that detects a predetermined event (N) of the ultrasonic signal ~~(A0, B0)~~ as ~~the~~ a reception time (t_0),
wherein the receiver unit (4) ~~is embodied in such a way that it~~
determines ~~the~~ a time (t_1) of a value ~~(Amp_{max}, T_S)~~ characteristic of the ultrasonic signal ~~(A0, B0)and determines~~ ~~the~~ as well as a time shift (Δt) of the time (t_1) ~~in relation~~ relative to the reception time (t_0) and
uses the time shift (Δt) to determine a correct time value for the reception time (t_0).

2. (currently amended) The ultrasonic flow sensor as recited in claim 1,
wherein the receiver unit (4) determines a maximum amplitude (Amp_{max}) of the ultrasonic signal ~~(A0, B0)~~ as a characteristic value.

3. (currently amended) The ultrasonic flow sensor as recited in claim 1,
wherein the receiver unit (4) determines ~~the~~ a chronological position (T_S) of the focal point of either the ultrasonic signal ~~(A0, B0)~~ or its envelope curve (6) as the characteristic value.

4. (currently amended) The ultrasonic flow sensor as recited in claim 1,
wherein the receiver unit (4) includes a comparator (10) whose input is supplied with a transducer output signal (5) and a reference signal (SW), and the receiver unit (4) determines a piece of information about the time (t_1) of the characteristic value ~~(Amp_{max}, T_S)~~ from the output signal of the comparator (10).

5. (currently amended) The ultrasonic flow sensor as recited in claim 4,

wherein the reference signal supplied to the comparator (10) is a threshold (SW) not equal to zero and the output signal of the comparator (10) is a pulse width modulated signal (K1) from which the time (t_1) of the characteristic value ~~(Ampmax, T_S)~~ is determined.

6. (previously presented) The ultrasonic flow sensor as recited in claim 1, wherein the reception time (t_0) is corrected as a function of the time shift (Δt).

7. (currently amended) A method for detection of an ultrasonic signal (A0, B0) in an ultrasonic transducer ~~(A, B)~~ by means of a receiver unit (4), which detects a predetermined event (N) of the ultrasonic signal ~~(A0, B0)~~ as a reception time (t_0), wherein the receiver unit (4) determines ~~the~~ a time (t_1) of a value ~~(Amp_{max}, T_S)~~ characteristic of the ultrasonic signal ~~(A0, B0)~~ and determines ~~the~~ a time shift (Δt) of the time (t_1) in relation to the reception time (t_0) and uses the time shift (Δt) to determine a correct time value for the reception time (t_0).

8. (currently amended) The method as recited in claim 7, wherein the receiver unit (4) determines a maximum amplitude (Amp_{max}) of the ultrasonic signal ~~(A0, B0)~~ as a characteristic value.

9. (currently amended) The method as recited in claim 7, wherein the receiver unit (4) determines ~~the~~ a chronological position of ~~the~~ a focal point of the ultrasonic signal ~~(A0, B0)~~ or its envelope curve (6) as a characteristic value.